

AMENDMENTS TO THE DRAWINGS

In the Office Action, the Examiner objected to the drawings because they fail to show descriptive legends for the elements in the drawings as described in the specification. Applicant hereby amends the drawings to address the Examiner's comments.

The attached sheets of drawings include changes to Fig. 1 through Fig. 9. These sheets replace the original sheets showing Fig. 1 through Fig. 9. In these figures, descriptive legends for the numbered elements have been added.

Attachment: Replacement Sheets.

REMARKS

Claims 2-28 were presented for examination and claims 2-28 are rejected. Claims 2-28 are currently pending in this application, of which claims 2, 14 and 26 are independent.

Applicants submit that claims 2-28 are in condition for allowance.

The following comments address all stated grounds of rejection. Applicants respectfully traverse all rejections and urge the Examiner to pass the claims to allowance in view of the remarks set forth below.

OBJECTIONS TO DRAWINGS

The drawings are objected to by the Examiner under 37 C.F.R. 1.83(a) as failing to show descriptive legends for the elements in the drawings as described in the specification. Corrected drawing sheets in compliance with 37 C.F.R. 1.121(d) are submitted herewith thereby mooting the objection with respect to the drawings. Accordingly, Applicants respectfully request the Examiner to withdraw the objection under 37 C.F.R. 1.83(a).

CLAIM REJECTIONS UNDER 35 U.S.C. §103

I. Claims 2, 6, 8, 10, 12-14, 18, 20, 22 and 24-25 Rejected As Unpatentable over Neale in view of Dolson.

Claims 2, 6, 8, 10, 12-14, 18, 20, 22 and 24-25 are rejected under 35 U.S.C. 103(a) as unpatentable over Neale et al. (US Patent Application Publication No. 2003/0131079 A1) (“Neale”) in view of Dolson et al. (US Patent Application Publication No. 2004/0006643 A1) (“Dolson”). Claims 6, 8, 10 and 12-13 depend on and incorporate all the patentable subject matter of independent claim 2. Claims 18, 20, 22 and 24-25 depend on and incorporate all the patentable subject matter of independent claim 14. Applicants traverse this rejection and submit

that Neale and Dolson, alone or in combination, fail to teach or suggest each and every element of the claimed invention.

A. Independent Claims 2 and 14 Patentable over Neale and Dolson

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. Claims 2 and 14 are directed to a method and system, respectively, for performing by proxies, discovery of a maximum transmission unit of a path between a client and a server in a more efficient manner. These claims recite a second proxy detecting fragmentation of a packet received from transmission of repacketized packets by the first proxy and transmitting an acknowledgment packet marked with an indicator that fragmentation has occurred to the first proxy. Applicants submit that Neale and Dolson, alone or in combination, fail to teach or suggest each and every element of the claimed invention.

In the Office Action, the Examiner admits that Neale fails to teach determining a size for a Path Maximum Transmission Unit (PMTU) for transmitting network packets. The Examiner cites Dolson for this purpose. Applicants respectfully disagree and submit that Dolson also fails to teach or suggest the features of the claimed invention for determining by proxies a size for a Path Maximum Transmission Unit (PMTU) for transmitting network packets. Dolson does not describe a second proxy detecting fragmentation of a packet received from transmission of repacketized packets by the first proxy and transmitting an acknowledgment packet marked with an indicator that fragmentation has occurred to the first proxy. Instead, Dolson describes a process within one proxy for fragmenting or not fragmenting TCP segments based on an existing maximum transmission unit known by that proxy. (see Fig. 8 and paragraphs 178-188). The proxy of Dolson does not transmit an acknowledgment packet marked with an indicator that

fragmentation has occurred to another proxy from which the fragmentation originated. The Examiner refers to paragraph [0234] of Dolson to cite that the state machine in Dolson monitors segments and acknowledgements coming from the other side of the connection. Mere monitoring does not equate to communications between proxies regarding detection by one proxy of fragmentation of repacketized packets transmitted from another proxy. Therefore, neither Neale nor Dolson teach or suggest each and every element of the claimed invention.

Furthermore, one of ordinary skill in the art would not be motivated to combine Dolson with Neale to teach or suggest Path Maximum Transmission Unit (PMTU) discovery between proxies as in the claimed invention. In fact, Dolson teaches one skilled in the art to avoid introducing fragments into a TCP segment that is not fragmented. (see Dolson, paragraph 183). Dolson assumes that any PMTU discovery has occurred (Dolson, paragraph 177) and processes TCP segments to avoid any additional fragmentation (Dolson, paragraphs 188-190). As a result, Dolson would teach away from the claimed invention by teaching one skilled in the art to avoid fragmentation to determine the PMTU. Therefore, there is no suggestion or motivation to combine Dolson with Neale.

Since Neale and Dolson, alone or in combination, fail to teach or suggest a second proxy detecting fragmentation of a packet received from transmission of repacketized packets by the first proxy and transmitting an acknowledgment packet marked with an indicator that fragmentation has occurred to the first proxy, Applicants submit that claims 2 and 14 are patentable and in condition for allowance. Claims 6, 8, 10 and 12-13 depend on and incorporate all the patentable subject matter of independent claim 2. Claims 18, 20, 22 and 24-25 depend on and incorporate all the patentable subject matter of independent claim 14. Thus, Applicants submit that claims 8, 10, 12-13, 18, 20, 22 and 24-25 are also patentable and in condition for

allowance. Therefore, Applicants request the Examiner to withdraw the rejection of claims 2, 6, 8, 10, 12-14, 18, 20, 22 and 24-25 under 35 U.S.C. §103.

II. Claims 26-27 Rejected As Unpatentable over Neale in view of Dolson.

Claims 26-27 are rejected under 35 U.S.C. 103(a) as unpatentable over Neale in view of Li et al. (US Patent Application Publication No. 2004/0001691 A1) (“Li”) and further in view of Dolson. Claim 27 depends on and incorporate all the patentable subject matter of independent claim 26. Applicants traverse this rejection and submit that Neale, Li and Dolson, alone or in combination, fail to teach or suggest each and every element of the claimed invention.

A. Independent Claims 26 Patentable over Neale, Li and Dolson

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. Claim 26 is directed to a method for discovering maximum transmission unit of a path by a proxy. This independent claim recites determining, by a first proxy, a size for a PMTU, the size of the PMTU increased by a predetermined percentage for each round trip time that elapsed without receipt of an indicator that fragmentation has occurred. Neale, Li and Dolson, alone or in combination, fail to teach this each and every element of the claimed invention.

The Examiner admits that Neale and Li fail to teach determining a size for a PMTU for transmitting network packets and cites Dolson for this purpose. As argued above with respect to independent claims 2 and 14, Dolson, alone or in combination with Neale, fails to teach or suggest each and every feature of the claimed invention for determining a size for a PMTU for transmitting network packets. Furthermore as explained above, one skilled in the art would not

find motivation to combine Dolson with Neale. Moreover, like Neale and Dolson, Li also fails to teach or suggest each and every feature of the claimed invention.

Li fails to teach or suggest determining by a PMTU which is increased by a predetermined percentage for each round trip time that elapsed without receipt of an indicator that fragmentation has occurred. In the Office Action, the Examiner equates Li's TCP rate control algorithm and throughput estimation to the above limitation of the claimed invention. Li describes an estimated network throughput calculation based on the MTU and round trip times. Throughput calculations and TCP rate control do not equate to the PMTU size increase of the claimed invention. There is no description nor suggestion in Li to increase the PMTU by a predetermined percentage for each round trip time without receipt of a fragmentation indicator. None of the references even describe, teach or suggest increasing the PMTU and not in the manner claimed. Thus, Neale, Li and Dolson, alone or in combination, fail to teach or suggest each and every feature of the claimed invention.

Since Neale, Li and Dolson, alone or in combination, fail to teach or suggest a second proxy detecting fragmentation of a packet received from transmission of repacketized packets by the first proxy and transmitting an acknowledgment packet marked with an indicator that fragmentation has occurred to the first proxy, Applicants submit that claim 26 is patentable and in condition for allowance. Claim 27 depends on and incorporate all the patentable subject matter of independent claim 26. Thus, Applicants submit that claim 27 is also patentable and in condition for allowance. Therefore, Applicants request the Examiner to withdraw the rejection of claims 26-27 under 35 U.S.C. §103.

B. Dependent Claims 3-5, 7, 11, 15-17, 19, 21, 23 and 27-28 Patentable over Neale, Dolson, Dempo, Li, Donzis and Badt

Claims 3, 5, 11, 15, 17 and 23 are rejected under 35 U.S.C. 103(a) as unpatentable over Neale in view of Dolson and further in view of Dempo (US Patent No. 6,934,288) (“Dempo”). Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as unpatentable over Neale in view of Dolson and further in view of Li et al. (US Patent Application Publication No. 2004/0001691) (“Li”). Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as unpatentable over Neale in view of Dolson and further in view of Donzis et al. (US Patent No. 6,973,097) (“Donzis”). Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as unpatentable over Neale in view of Dolson and further in view of Badt et al. (US Patent No. 5,959,974) (“Badt”). Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as unpatentable over Neale in view of Li and further in view of Dolson. Claim 28 is rejected under 35 U.S.C. 103(a) as unpatentable over Neale in view of Li and further in view of Dolson and Badt. Applicants traverse these rejections and submit that none of the references of Neale, Dolson, Dempo, Li, Donzis and Badt, alone or in combination, teach or suggest each and every feature of the claimed invention.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. Claims 3-5, 7 and 11 depend on and incorporate all the patentable subject matter of claim 1. Claims 15-17, 19, 21 and 23 depend on and incorporate all the patentable subject matter of independent claim 14. Claims 27-28 depend on and incorporate all the patentable subject matter of independent claim 26. Applicants submit that independent claims 1, 14 and 26 are patentable and in condition for allowance in view of the arguments stated above. Therefore, Applicants submit that claims 3-5, 7, 11, 15-17, 19, 21, 23 and 27-28 are also patentable and in condition for allowance. Further, as with each of Neale and

Dolson, none of the references of Dempo, Li, Donzis and Badt teach or suggest determining a size for a Path Maximum Transmission Unit (PMTU) for transmitting network packets as in the claimed invention. Therefore, Neale, Dolson, Dempo, Li, Donzis and Badt, alone or in combination, fail to detract from the patentable subject matter of these dependent claims. Therefore, Applicants respectfully request the Examiner to withdraw the rejection of claims 3-5, 7, 11, 15-17, 19, 21, 23 and 27-28 under 35 U.S.C. §103.

CONCLUSION

In light of the above arguments, Applicants contend that each of the Examiners rejections has been adequately addressed and all of the pending claims are in condition for allowance. Accordingly, Applicants respectfully request reconsideration, withdrawal of all grounds of rejection, and allowance of all of the pending claims.

Should the Examiner feel that a telephone conference with Applicants' attorney would expedite prosecution of this application, the Examiner is urged to contact the Applicants' attorney at the telephone number identified below.

Respectfully submitted,

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